Washington State Department of Transportation

WA-Trans Puget Sound Pilot (WA-Trans Pilot I)

Project Charter Agreement

Version 1.1

October 31, 2005

Prepared by
Tami Griffin

Project Charter Agreement Approval

This project charter represents an agreement between WSDOT Geographic Services Office and the WSDOT Office of Information Technology (IT). My signature indicates that I have reviewed the attached project charter in its entirety and concur with its contents. Separate Memorandum of Understanding have been prepared for King County, Pierce County and Puget Sound Regional Council.

Charter Approval, Version 1.0

_____ Date_____ George Spencer, Manager, WSDOT Geographic Services	_____ Date_____ David Hamrick, Director WSDOT Office of Information Technology
_____ Date_____ Veronica Diseth, Application Services Manager WSDOT Office of Information Technology	_____ Date_____ Tim Crabb, Infrastructure Server Manager WSDOT Office of Information Technology
_____ Date_____ Dennis De Fries, Network Services Manager WSDOT Office of Information Technology	

Table of Contents

WA-Trans Pilot I
Charter

Introduction

The purpose of this Charter is to define the WA-Trans King and Pierce County Pilot project and to document the plan, expectation and agreements underlying that. This pilot is funded by a United States Geological Survey (USGS) National Spatial Data Infrastructure (NSDI) Cooperative Agreement Program (CAP) grant and by in-kind resources provided by King County, Pierce County, Puget Sound Regional Council (PSRC) and Washington State Department of Transportation (WSDOT) and the USGS.

Background

The WA-Trans project consortium has been working for three years collaboratively. The WA-Trans Pilot I is the first effort to implement part of WA-Trans and to test the processes and business value of WA-Trans as documented by the WA-Trans project and consortium.

What is WA-Trans?

WA-Trans' goal is to develop and maintain a seamless statewide transportation dataset in the public domain for use in GIS. WA-Trans will use the best data available from municipal, county, tribal and state organizations across the state of Washington. Statewide business needs for this data have been documented and prioritized. WA-Trans data model, standards, conceptual architecture are completed and WA-Trans is ready to implement a pilot to illustrate that it will meet the business needs identified.

The WA-Trans architecture design consists of a database, software utilities, standards, manual processes, organizational structures and agreements needed to maintain a continually improved dataset over time using data from providing organizations. Implementation of these elements will provide integrated transportation data about public roads, railroads, airports, ferry terminals and routes, port facilities and non-motorized transportation routes.

The WA-Trans data model was developed in partnership with the Oregon Department of Transportation (called All-Roads in Oregon) and will serve both Oregon and Washington for transportation framework data and facilitate a dataset for NSDI and The National Map (TNM) purposes that will be seamless between both states. Software utilities developed in Washington will also be useful for the Oregon project.

Several different applications are proposed for the WA-Trans architecture, but by far the most critical for success of the project is the WA-Trans translator. This application will facilitate participation by local municipalities, counties, and tribes without forcing them to significantly

change their GIS data structure to do so. Data providers will use the translator to transform their data to the format required by WA-Trans. This translation functionality will be customized and stored for each data provider so it can be reused and updated, thus supporting maintenance for WA-Trans. The same translation function will be available for data users to translate WA-Trans data into a format that they can introduce directly into their GIS systems. This translator will also provide data to the Federal Government including The National Map. Data will be provided to meet INCIT Project 1574-D, Geographic Information Framework Data Content Standard, Public Review Draft version. Metadata will also be collected and provided to TNM using the Washington Information Services Board approved Geographic Information Technology Standards for Metadata, which is derived from the FGDC Content Standard for Digital Geospatial Metadata Version 2. Requirements for the translator were completed through a Microsoft Grant for Enterprise Agreement customers with Microsoft partner Bfirst Solutions, Inc.

An RFP was developed and released by the WA-Trans Project through the WSDOT OIT Contracts Management Office. Two vendors responded to the RFP. Neither was selected, but a COTS translator product was selected. The ESRI Data Interoperability Extension along with Model Builder (part of the ArcGIS suite) was selected for use. More on how this will be used follows.

Who is the WA-Trans Consortium?

A statewide consortium of partners and steering committee participants has been established and has been working together for over two years. The partners include 8 cities, 22 counties, 13 state agencies, 7 federal agencies, and 16 other partners. The Washington State Department of Transportation (WSDOT) is funding a full-time project manager as lead. All other resources are professional level GIS managers, technicians or subject-matter experts in various transportation modes and functions. These resources are in-kind, provided by consortium members. To date the consortium has contributed more than 5000 hours on the project.

Business Need and Justification

The WA-Trans Steering Committee performed a complete business needs assessment. Project decisions are driven by the business needs. Significant business value has been identified for the WA-Trans project. Business needs include:

- Support for statewide and regional transportation planning,
- Coordination of transportation during an emergency,
- Planning for emergencies,
- Environmental management both by transportation planning and forest and land management organizations,
- Various law enforcement uses including determining placement of registered sex offenders in relationship to schools and day care locations,

- Traffic safety tracking and analysis including accident location, emergency response, and follow up,
- Supporting the Federal Functional Classification process and the Highway Performance Monitoring System,
- Coordination of data across Washington State using the transportation system, addresses and route/milepost as key elements,
- Support for locating things by address on all roads across the state,
- Support for standardization and exchange of transportation data between government entities,
- Providing data to Federal initiatives including The National Map.

Additionally:

- WA-Trans is a key strategy in the Washington State Traffic Records Committee Strategic Plan used for traffic safety information technology coordination and prioritization for state and local agencies,
- WA-Trans is a key component of the Trip Planner Phase II implementation.

Project Vision

The Washington State Transportation Framework for GIS is a seamless set of data that are consistent, connected, and continuous between segments of the transportation framework and with other framework layers. The transportation framework represents the best data available and includes mechanisms to improve over time. Framework data is accessible to the general public at the least cost with the least restrictions**.**

The WA-Trans Pilot I is the first step in implementation of the statewide transportation framework. It is geographically situated to test the implementation in an urban area with local governments with sophisticated GIS systems and data. Experience gained will be used in all future WA-Tran pilots and will be the basis for cost, and labor estimates and other project decisions. Additionally, showing business value is a key vision for all WA-Trans pilots. Documented business value will provide incentives for funding and participation in support of the overall project vision and objectives.

Project Objectives

Various objectives are sought for the WA-Trans Pilot in the Puget Sound area. These are:

- Implement and test the concept of using a translator for exchanging geospatial transportation data from various local providers into WA-Trans and then providing WA-Trans data back to local providers and federal partners, specifically The National Map,
- Test the usability of the WA-Trans database design as a data source for integrated geospatial transportation data,

- Develop and document processes for data integration (vertical and horizontal), and quality assurance and quality control processes (QA/QC),
- Create a two county regional data set that can be tested for business benefit by various regional entities as a proof of concept and justification for a statewide implementation,
- Use the pilot as a basis for more detailed estimates and implementation plans for other pilots and for a statewide implementation,
- Establish agreement points between jurisdictions where necessary, documenting the process established,
- Develop data sharing and partnership agreement in long-term support of WA-Trans where time permits, utilizing memorandum of understanding where time prohibits,
- Develop plans for long-term maintenance of the data set and use those as the basis for statewide long-term maintenance plans,
- Provide a two county data set to The National Map via the WA-Trans Translator,
- Develop detailed lessons learned documentation that will benefit other WA-Trans pilot implementations and the statewide implementation.

Project Scope and Deliverables

The integrated data to be delivered, the software to be implemented and the specific transportation mode data to be delivered define this pilot project scope.

Geographic and Jurisdictional Scope

This pilot is limited to the King County and Pierce County. As much as possible, municipalities and tribes within those boundaries will be included. Where feasible the counties will act as the coordinator for the data within their boundary.

Data

- The road data will include address ranges and other attribution as described in the WA-Trans Standards. The data will be integrated to provide seamless connectivity between both counties and consistent attribution for available attributes.
- Time permitting the data will include ferry routes (provided by WSDOT).
- Time and availability permitting the data will include railroads (provider not yet determined).
- ISB metadata will available based on the WA-Trans standards.

Software Implementation

The translator is a critical success factor for WA-Trans and must be in place to facilitate local partners providing data to the pilot. The scope for this pilot includes prototyping, and fully implementing as much as possible, a translator that will reformat data from the various standard spatial data formats into WA-Trans required format and re-project the data as needed. The translator will also take the final two-county data set and format it to

meet INCIT Project 1574-D, Geographic Information Framework Data Content Standard, Public Review Draft version. The translator will facilitate long-term maintenance of WA-Trans. Refer to Appendix C and D for conceptual architecture.

The scope of the translator implementation includes:

- Using the translator requirements to develop a Request for Proposal (RFP) for purchase and customization or development of the translator as described in the requirements,
- A demonstration of commercial, off the shelf (COTS) translators that are proposed as solutions and review of customization required to meet requirements,
- Testing of COTS translators being considered as solutions for how well they implement in the WSDOT environment,
- Selecting a vendor solution for implementation as the WA-Trans Translator,
- Developing a contract with successful vendor of the RFP,
- Working with the vendor in a standard software development lifecycle process to implement the WA-Trans Translator,
- Performing testing and approval on the translator at WSDOT, Pierce County, PSRC, The National Map and ODOT,
- Implementation of the Translator in a stable test environment (maybe QA) at WSDOT so it can be used during the pilot project,
- Development of a standard process for using the translator (with King and Pierce Counties and Puget Sound Regional Council,
- Hire a technical writer to document that process and develop RoboHelp documentation for that process,
- PSRC will test that process and related help file while translating the data for themselves and into the format needed by The National Map,
- Using the translator to get data from providers including King and Pierce Counties,
- Using the translator to WA-Trans data back to King and Pierce Counties,
- Using the translator to provide data to TNM for hosting.

Process Development and Documentation

Many processes will be developed, implemented and documented during WA-Trans Pilot I. These processes include:

- Deciding which data to use when more than one data provider possesses, and will submit, the same data to WA-Trans,
- Conflation of attribution on line work,
- Development of data sharing agreements and memorandums of understanding regarding data sharing,
- Development of agreement points and related documentation,
- Use the translator software, for bringing data into the WA-Trans test environment and for translating the two-county data set for TNM.

- Maintenance of agreements, data and software.

Data Services

The ultimate goal of the pilot project is to have a two county data set made available to The National Map. The following data services must be implemented in the most reasonable manner possible to assist with meeting that goal:

- A test version of the WA-Trans working storage database must be implemented in a geodatabase for use in testing the proposed translator and data integration processes,
- A test version of the WA-Trans database must be available for PSRC to use during the process of integrating data,
- A populated test version of the WA-Trans database must be available at WSDOT to provide the integrated pilot dataset to TNM and other groups who may wish to use the data and test the viability of the WA-Trans data for various business needs,
- This final dataset must be backed up and stored so it can be retrieved for additional work by the WA-Trans project. There are plans underway to add WSDOT centerline data to this dataset.

Project Management

The following project management deliverables will assist with future pilot projects and estimates for statewide implementation:

- Pilot Charter
- Pilot work breakdown structure, schedule, and actual time recorded,
- Request for Proposal for the WA-Trans Translator,
- Change requests,
- Issue papers,
- Pilot communication plan,
- Risk management plan,
- Lessons learned,
- Final report.

Success and Completion Criteria

A WA-Trans Translator working prototype will be developed that will translate King County and Pierce County data into the required format, coordinate system and projection for WA-Trans. The prototype will also translate WA-Trans data back into the format of the data provider/user. King and Pierce County data will be translated and integrated into a seamless data set with addresses. Railroad and ferry data will also be integrated where available. This public domain data will reside in the WA-Trans pilot database. This data will be translated into the required format for The National Map and hosted on The National Map server at Menlo Park, CA as part of Seattle Tacoma National Map Service. A Final report will be developed and findings

presented. Candidates for presentation include WAGIC, WA URISA, National URISA, and GIS-T.

Because this is a pilot project both process and outcome are critical and must be consistent and documented. The success can be defined both in the development of processes, which work and can be used in future pilots or to define future automation, and in the integration of a dataset into the WA-Trans database, which can be used by various partners in business endeavors to test the usability of the data.

Critical Success Factors

- Successful completion of a working WA-Trans Translator,
- Successful completion of memorandum of understanding with King and Pierce Counties, PSRC, US Geological Survey and WSDOT,
- Successful completion of integrated data set from Pierce and King County in the WA-Trans test database,
- Documentation of processes and policies used to guide decisions made and technical work to be used by future pilots,
- Successful testing of the combined WA-Trans dataset by various data users for a variety of business needs to demonstrate usefulness,
- Documentation of the skill sets, time, and cost of the pilot work done for use in future estimation.

Project Authority

This project is sponsored out of the WSDOT Geographic Services Office.

Roles and Responsibility

WSDOT Geographic Services Office
Geographic Services Manager

- Act as pilot sponsor,
- Resolve disputes as needed,
- Approve use of significant funds,
- Provide use of Geographic Services resources as negotiated.

Project Manager

- Develop charter,
- Develop work breakdown structure and schedule,
- Develop budget plan,
- Develop risk management, change management, issue management and communication plans,
- Lead the pilot advisory team,
- Develop and implement RFP,
- Coordinate contracting with successful vendor of the RFP,
- Coordinate testing of the translator during RFP,
- Hire and manage the technical writer,
- Develop memorandums of understanding with external partners,
- Coordinate with the Office of Information Technology for resources as described in this charter,
- Coordinate with PSRC for work as described in this document,
- Coordinate with Pierce County GIS for work as described in this document,
- Coordinate with the US Geological Survey for work as described in this document,
- Coordinate with King County Metro for the King County data used in the pilot,
- Coordinate with the US Geological Survey for providing data to be hosted on TNM,
- Develop and implement test data sharing agreements for long-term maintenance of data used in this pilot,
- Oversee and coordinate resource management and time tracking as appropriate,
- Oversee change management,
- Communicate project findings with the WA-Trans steering committee, partners and other stakeholders,
- Management the project budget,
- Develop pilot reports for the US Geological Survey,
- Present pilot findings.

WA-Trans Technical Lead

- Coordinate with OIT for completion of technical tasks,
- Test to make sure servers, databases and software are available and functioning for pilot,
- Maintain WA-Trans Standards,
- Coordinate on changes to data model and database,
- Test use of databases when they are implemented,
- Coordinate on development of loading procedures for databases,
- Coordinate with technical writer to facilitate access to required IT resources during pilot,
- Coordinate with non-WSDOT partners to facilitate access to required IT resources during pilot.

Technical Writer

- Coordinate with WA-Trans Technical Lead to make sure that all required IT access exists,
- Coordinate with King and Pierce Counties for development of processes for use of Model Builder and DIE,
- Develop user documentation for processes for use of Model Builder and DIE in relationship with providing data to the Puget Sound Pilot and the WA-Trans database,
- Develop help files using RoboHelp and make available on-line for use with Model Builder and DIE,
- Work with King and Pierce Counties to perfect help files,
- Work with Puget Sound Regional Council to use help files in translating WA-Trans data back to TNM required format and for use by PSRC,
- Finalize help files and user documentation,
- Provide input to final project report.

Environmental Systems Research Institute, Inc. (ESRI) – Contractor for WA-Trans Project

- Develop and implement prototype design workshop for DIE with King and Pierce Counties, Puget Sound Regional Council and WSDOT Technical Writer,
- Provide DIE Technical Support ad hoc as needed,
- Provide additional DIE ad hoc training as needed,
- Provide feedback on the WA-Trans data model in a meeting with WA-Trans and WSDOT data modelers and database administrators,
- Provide support for DIE and Model Builder use in Citrix as needed by OIT,
- All items documented above will be completely defined in a proposal and contract between WSDOT Geographic Services and ESRI, Inc..

WSDOT Office of Information Technology (OIT)

- Provide contract resources to assist with the RFP,
- Provide access to a test version of WA-Trans for demonstration and testing of proposed translator solutions,
- Provide access to RoboHelp and the DIE to the technical writer,
- Provide support for implementation of the DIE and Model Builder over Citrix,
- Provide access to the translator to Pierce County GIS, King County Metro, PSRC and the US Geological Survey and internal WSDOT data providers as needed during the pilot,
- Provide WSDOT road data for the pilot as needed (Michelle Blake),
- Participate in Pilot Advisory Team (Michelle Blake),
- Keep the boundary layer used for this pilot for future use (Michelle Blake),
- Provide access to a test version of the WA-Trans database to PSRC during the pilot,

- Provide access to a test version of the WA-Trans working storage database in a geodatabase to King and Pierce Counties and Puget Sound Regional Council during the pilot,
- Keep the results of the WA-Trans pilot in a database that can be backed up and accessed by additional pilots and provided to specific groups for testing purposes.

Puget Sound Regional Council

- Participate in Pilot Advisory Team,
- Assist with demonstration of possible translator solutions,
- Evaluate demonstrations of translator,
- Participate in selection of successful vendor from RFP process,
- Participate in testing the model builder and DIE user manual and RoboHelp instructions for translation,
- Participate in test negotiations regarding agreement points, data sharing and WA-Trans maintenance,
- Integrate data from King County, Pierce County and WSDOT to develop a seamless two county coverage with addresses, railroads if available and ferry routes and store in the WA-Trans test database,
- Develop and document in detail processes for integration, conflation, and QA/QC for use in other WA-Trans pilots.
- Test the use of the translator for downloading the WA-Trans pilot database in the format PSRC needs,
- Use the DIE and Model Builder to develop a translation for The National Map of the two-county dataset,
- Test the WA-Trans pilot database for PSRC business needs and document the results,
- Track time to comply with the terms of the NSDI CAP Grant,
- Participate in change management and issue management,
- Document lessons learned,
- Approve the final report.

Pierce County GIS

- Participate in pilot advisory team,
- Approve translator user test plans for the RFP,
- Assist with demonstration of possible translator solutions,
- Provide a boundary layer to be used in development of agreement points to King County and WSDOT,
- Participate in selection of successful vendor from RFP process,
- Participate in development of a King County translation for WA-Trans and provide input into the user and help documentation developed of the Model Builder and DIE,

- Participate in test negotiations regarding agreement points, data sharing and WA-Trans maintenance,
- Provide Pierce County data to the WA-Trans pilot,
- Test the use of the translator for providing Pierce County data to the pilot project and document results,
- Provide data expertise regarding Pierce County data,
- Test the use of the translator for downloading the WA-Trans pilot database in the format Pierce County needs and document results,
- Track time to comply with the terms of the NSDI CAP Grant,
- Participate in change management and issue management,
- Document lessons learned,
- Approve the final report.

King County Metro

- Participate in Pilot Advisory Team
- Participate in test negotiations regarding agreement points, data sharing and WA-Trans maintenance,
- Participate in development of a King County translation for WA-Trans and provide input into the user and help documentation developed of the Model Builder and DIE,
- Provide King County data to the WA-Trans pilot,
- Test the use of the translator for providing King County data to the pilot project and document results,
- Provide data expertise regarding King County data,
- Track time to comply with the terms of the NSDI CAP Grant,
- Provide input in lessons learned,
- Approve the final report.

U.S. Geological Survey – Northwest Geographic Science Team

- Participate in Pilot Advisory Team,
- Approve translator user test plans for the RFP,
- Assist with demonstration of possible translator solutions,
- Participate in selection of successful vendor from RFP process,
- Coordinate hosting WA-Trans data on TNM at Menlo Park, CA,
- Coordinate test of the use of the translator for downloading the WA-Trans pilot database in the format TNM needs,
- Participate in change management and issue management,
- Document lessons learned,
- Approve the final report.

Pilot Advisory Team

- Provide coordination for pilot activities and decisions,
- Make decisions as appropriate regarding change management,
- Provide issue resolution as appropriate,
- Approve pilot plans and deliverables,
- Participate in development of lessons learned,
- Participate in and support coordination of testing of pilot data results in various for various business uses,
- Approve final report.

Stakeholders

Executive Sponsor

Paula Hammond is the WA-Trans Executive Sponsor. She is provided with regular status reports and her role is to advise the project and provide input from a WSDOT executive perspective.

Washington Transportation Framework Partners

The Transportation Framework Project Team is made up of representatives from the partner organizations. The project team is responsible for the approval of the project charter, high-level project approach, final project business and functional requirements, and high-level project deliverables. Currently many different levels and functions of government participate including cities, counties, tribes, state agencies, federal agencies and private business.

Transportation Framework Project Steering Committee

This committee is made up of representative from the project partners group. These representatives are willing to commit more time to the project and may have the ability to assist with providing resources or funding to the project. They have been meeting 6 hours every six weeks for three years so far. This group has assisted with development and evaluation of the business requirements and prioritizes them, functional requirements for a particular set of deliverables, determines the scope of individual phases of the project, supports that scope with change management, and provides issue resolution support. They have participated in developing the standards, data model, architecture and processes and policies that are the guidelines for this pilot.

Geographic Information Technology Subcommittee (GIT)

This committee makes recommendations to the Washington Information Services Board. It includes Washington State Agency executives and other representatives including two members

of the ISB. This committee provides executive support and input to WAGIC activities and a coordinated approach to GIS for state agencies. This committee is also looking at enterprise issues regarding GIS and statewide framework data fits that category.

Washington State Geographic Information Council (WAGIC)

The WAGIC is recognized as the statewide body responsible for coordinating and facilitating the use and development of Washington State's geospatial information. WAGIC is an advisory body to the Framework Management Group (FMG) and supports the vision of the Washington Geospatial Data Framework. WAGIC serves as a resource for dispute resolution and/or deadlock decision making to the FMG.

Framework Management Group (FMG)

The FMG is a consensus building body that provides overall direction to individual framework projects. The FMG determines framework priorities, identifies and facilitates resolution of common framework issues, and ensures coordination among the projects. Overall framework decisions and decisions that are out of individual project scope are made by the FMG. Widespread participation is solicited and encouraged from federal, state, local, private, tribal, and professional organizations.

Potential Users Including the General Public

The results of this pilot will be available to the general public via The National Map. The lessons learned and decisions made as a result of this project will affect how WA-Trans implementation is made available to the general public and as yet unknown stakeholders.

Project Estimate

Salaries	Role	Rate	Hours	Total	Source
Tami Griffin	Project Manager	$49.00	640	$31,360	WSDOT
Brian Jones	Database Design	$44.26	60	$2,656	WSDOT
Michelle Blake	Database Design, Provide WSDOT data	$44.26	140	$6,160	WSDOT
Data Management Services	Implement Database	$47.00	50	$2,350	WSDOT
Infrastructure Services	Set up access outside WSDOT	$46.53	12	$558	WSDOT
Contracting Services	RFP				WSDOT
IT Project Services	Testing and evaluation for RFP	$44.36	40	$1,774	WSDOT
GIS Analyst	R, T, I	$61.00	72	$4,392	Pierce County
GIS Analyst	R,T,I	$75.00	220	$16,500	PSRC
Sr. GIS Analyst	Tech. Lead – R, T, I	$100.00	60	$6,000	PSRC

Field Expenses	Description	Total	Source
Tami Griffin	CCAP Kickoff Workshop	$1,000	Grant
Tami Griffin	Overnight trips to Seattle (3 trips)**	$900	WSDOT
Tami Griffin	Day Trips to Seattle (5 trips)* *	$400	WSDOT
Tami Griffin	Day Trips to Tacoma (8 trips)**	$250	WSDOT

Other Direct Costs	Description		Total	Source
Data	King County data valued at 7.5% match		$5,625	King County
Data	Pierce County data valued at 7.5% match		$5,625	Pierce County
Translator	Breakdown		$74,000	Grant
	Technical Writer	$18,796.00		
	ESRI Work	$31,252.00		
	RoboHelp	$7,052.00		
	ITAS 2 to integrate WSDOT Data	$16,900.00		
Total Direct Costs			$159,551	

* R.T.I. – Requirements for translator, Test translator and integration, perform Integration
** Travel includes lodging and meals for overnight visits and mileage on P.O.V. as well as one meal for day trips.

Project Schedule and Work Plan

Task	*Start Date*	*End Date*
Project Initiation	November 04	March 05
Data Model and Standards	October 04	May 05
Requirements JAD	November 04	December 04
RFP	June 05	September 05
Implement Database	October 05	November 05
Software Development	October 05	January 06
Translator	October 05	December 06
Integrate Data	December 05	February 06
King County	December 05	January 06
Pierce County	December 05	January 06
Rail and Ferries Data	December 05	January 06
Quality Assurance/Quality Control	January 06	February 06
Test Combined Data Set for Usability	February 06	May 06
Provide Data to TNM	March 06	March 06
Final report	March 06	June 06

Project Assumptions

- Data will be made available in a timely manner using Memorandum of Understanding (MOU) and formal data sharing agreements will be signed between agreeing organizations as time permits.
- Agreement points where data does not match will be reached in a timely manner between jurisdictions and organizations. We will strive for agreement on 80% of the points and handle the additional 20% as exceptions. We will document best practices in establishing agreement points.
- The project will be able to identify the correct data provider and obtain the authoritative data in a timely manner.
- Key staff resources from all identified sources with the necessary technical ability are available and can be scheduled to complete project tasks.
- Existing infrastructure will be used to make transportation framework data accessible.
- A translator exists that can be customized appropriately in a limited time frame.
- The budget is sufficient to pay for a translator and customization with enough functionality to perform the core requirements in the timeframe of the pilot.

- Adequate resources are available from the steering committee, the participating organizations and WSDOT OIT during the demonstration and testing phase to ensure selection of the best possible alternative.
- The WA-Trans data model can be implemented and utilized with minimal modifications.
- The implemented version of the translator and database can be made available to pilot partners including those outside of WSDOT.
- Pilot test results will represent the statewide situation enough to use these results to determine approaches.
- When pilots are successful the results will become part of the framework implementation.
- Mechanisms will be found for maintaining the translator through other pilot funding and eventually through continued funding at WSDOT.

Project Risk Assessment

The WA-Trans Pilot I has a variety of different risks as do most projects. The fact that WA-Trans is performing pilot projects is a risk mitigation strategy for a large project that has a significant number of diverse stakeholders and organizations involved. However, the outcome of this pilot will affect future funding and other decisions, which can be the difference between success and failure of the overall project.

A detailed risk assessment and mitigation strategies for the various risk identified can be found in Appendix B. Risks are categorized and defined in terms of risk conditions and risk consequences. A single risk is a combination of a condition and consequence. The risk exposure was evaluated in terms of the probability of the risk occurring and the impact to the pilot should the risk occur. Four categories of risks were identified. These are described below along with a summary of any high exposure risks identified in each category:

- ***Participation:***
  - Municipalities or tribes within King or Pierce County may not participate, either because of a lack of understanding of the project, lack of funding, or lack of agreement regarding the value.
  - Inadequate regular communication, such as that usually need to coordinate a project could lead to failure of partners to participate in meetings, provide resources, or identifying partners critical needs. Additionally, data needed may not be provided as a result of poor communication.
  - If new municipalities in King or Pierce County are brought into the pilot, who have not previously participated in the project it could lead to change in business drivers and priorities and scope creep.
  - Many of the resources are “in-kind” and not directly funded through the pilot budget and they must be shared with other priorities. There is a risk of the project schedule not being followed.

- ***Funding***:
  - The pilot funding is limited to monies reserved for building the translator. Those monies are not available to pay for maintenance on the translator, which could seriously limit future changes, updates and upgrades.
  - Efforts are being made to identify a solution that would be part of the Transportation Pooled Fund pilot, thus providing funding for the course of development of WA-Trans. Funds would still need to be found for long-term maintenance.

- ***Agreements:***
  - During the pilot it is possible that agreements with all jurisdictions for sharing data cannot be reached in time that would lead to missing data.
  - If formal data sharing agreements cannot be reached during the time of the pilot it is possible that data will not be maintained as WA-Trans moves on to other pilots and implementation.

- ***Technical:***
  - The WA-Trans translator and test database for the pilot must be available to a variety of different organizations during the course of the pilot. It is possible that firewall issues and other complexities could prevent this and lead to duplicate databases being maintained during the pilot.
  - While some high-level research has been done on the idea of the translator, until the RFP is released and completed it is not certain that the translator can be built within the cost range or time frame of the WA-Trans pilot one.
  - It is also possible that less effective technology will be used during the pilot leading to extra time or cost.

Project Charter Review History

Version	Author	Reviewer(s)	Signature	Date of Review
Draft	Tami Griffin	OIT Management Team		4/13/2005
Draft	Tami Griffin	Puget Sound PAC		4/18/2005
Draft	Tami Griffin	OIT Project Characteristics Meeting		5/17/2005
Version 1.0	Tami Griffin	David Hamrick		8/16/2005

Courtesy Copies to be provided to:

George Horning – KCGIS Manager, george.horning@metrokc.gov

Appendix A – Communication Plan

Introduction

The Washington Transportation Framework for GIS (WA-Trans) project is beginning work on pilot projects. Multiple pilots could run concurrently. Because of this likelihood, this document has been developed to provide common processes and direction for communication related activities for all pilot projects. Those activities are change management and issue management (dispute resolution). Those processes are also described in this document following the formal communication plan.

The communication plan consists of the following parts:

- Description of Organizational Units
- Communication Flow Diagram
- Description of Planned Communication Deliverables or Events
- Communication Matrix showing who participates, what they are participating in, what their level of involvement is and the method of delivery for the communication as well as how frequent the communication is.
- Change Management Plan
- Change Request Form
- Issue Management Plan
- Issue Form

It is anticipated that there will be adjustments to this plan on a pilot-by-pilot basis, but the structure of the participants' roles and the processes and communication deliverables should be fairly consistent. Details of how each of these adjustments is handled will be documented in Pilot Charters.

Organizational Units

Project Manager - Manager of the statewide WA-Trans effort.*

WA-Trans Steering Committee - Steering committee of the statewide WA-Trans effort.*

Data Modeling Team – Works with Oregon data modeling team to extend the "All Roads" data model for Washington needs.

Pilot Advisory Committee – This committee is formed for the duration of the pilot. It consists of the Project Manager, Pilot Technical Lead, Steering Committee member and Partner Representative(s).**

Pilot Technical Lead – This individual provides leadership over a specific pilot effort and the related pilot implementation.**

Pilot Team – This is the technical team that implements the pilot project.**

Pilot Partners – Representatives from agencies and jurisdictions providing data or testing business needs for the pilot.

WA-Trans Partners – Partners of the statewide WA-Trans effort.*

Framework Management Group – Coordinating group between various Washington State framework data themes. This group reports to the Washington Geographic Information Council (WAGIC).*

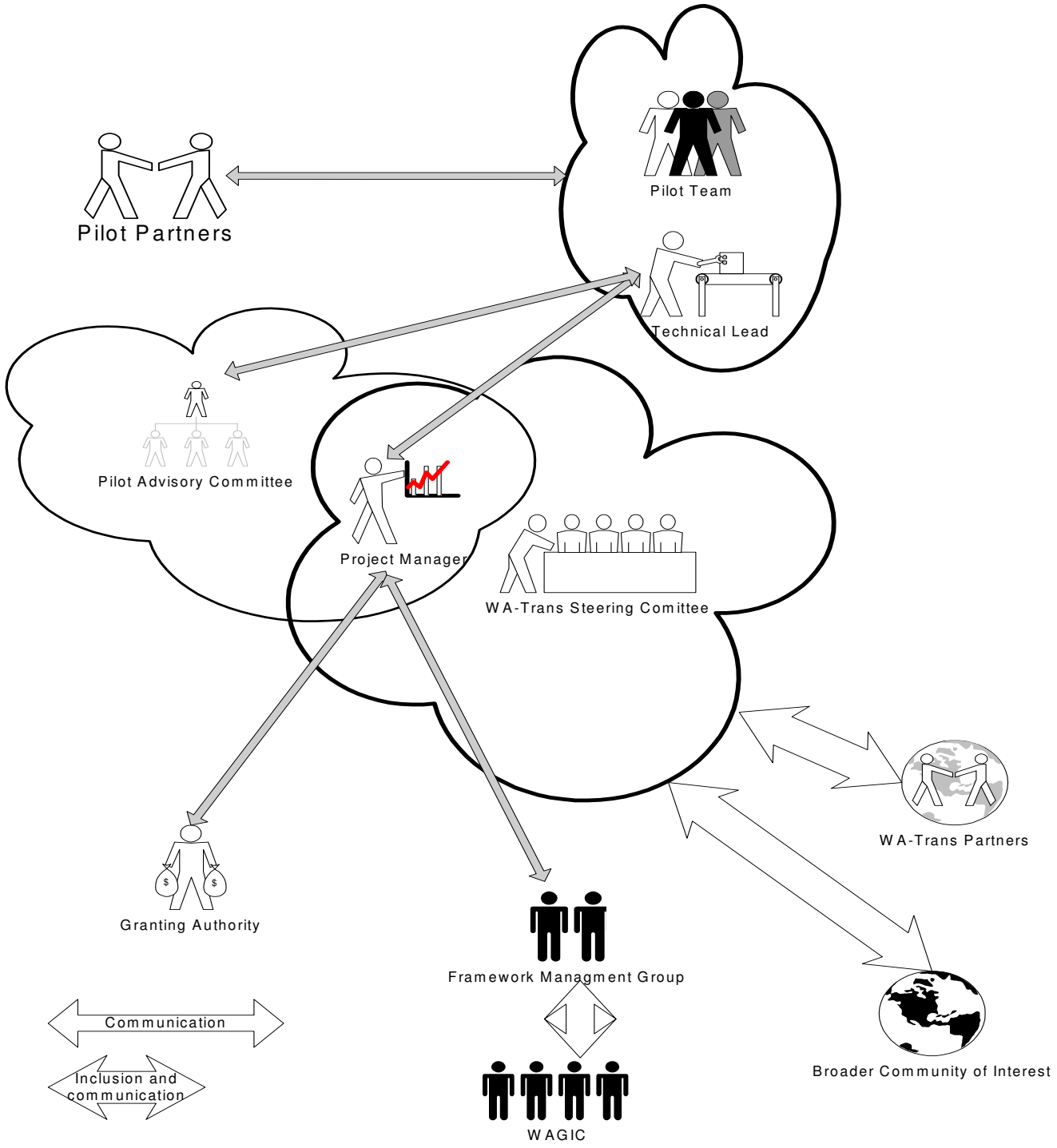
Granting Authority – The authority paying for the pilot. The communication with this group will change as funding sources change and will be adjusted for each pilot as needed.**

Broader Community – This includes interested parties who may be receiving information about the WA-Trans effort and/or any specific related pilot effort but are not partners.

***NOTE** – The specific description of the roles and responsibilities of this group or individual can be found in the WA-Trans project charter at http://www.wsdot.wa.gov/mapsdata/TransFramework/presentations.htm#Documents.

****NOTE** – The specific description of the roles and responsibilities of this group or individual can be found in the specific charter to be developed for each pilot effort.

WA-Trans Pilot Communication Flow Diagram



Communication Events

Charter –Documents agreement between partners regarding pilot scope, roles and responsibilities, metrics, and business needs to be tested.

Schedule –Includes a work breakdown structure, project schedule, budget and specific resources assignments for a pilot.

Status Report (High Level & Detailed) – Status reports will be given periodically to various levels as described. This includes reports on budget, resources, and status against the schedule, change requests and issues to resolve.

Change Request –Form to document requested changes to the scope of the project. This is described in more detail in the change management section of this document.

Issue Statements – Documentation of an issue which is causing slowing down or stopping pilot progress or which is anticipated to when it becomes critical. This is described in more detail in the issue management section of this document.

QA/QC Plan (High Level & Detailed) –Plan for testing the viability of the data after it has been integrated. Testing will occur at various levels.

Metrics Reports (High Level & Detailed) – Report on how the pilot meets the standards and measurements set for determining success.

Marketing Plan – A communication plan directed at reporting the successes, value and benefit of WA-Trans based on specific pilot results.

Database Review – Review of final database before it is used in a pilot effort.

OIT Change Management – Placeholder if the pilots are implemented at WSDOT.

OIT Database Review – Placeholder if the pilots are implemented at WSDOT.

OIT Implementation Meeting –Placeholder if the pilots are implemented at WSDOT.

Pilot Lessons Learned – Final document describing what worked well, what should be done differently and project management lessons (CBA, schedule feedback, budget feedback).

Partnership Memorandum of Agreement (Pilot) – A formal agreement between partners of a pilot regarding resources and data for the pilot.

Data Sharing Agreement – A formal agreement between data providers and the WA-Trans project regarding long term sharing and maintenance of data.

Licensing Agreement –Placeholder for results of decision on licensing in Steering Committee.

Software Requirements and Scope (High Level & Detailed) – Specific descriptions of software to be developed during a pilot. High level is provided prior to the pilot and detailed are a deliverable of the pilot.

Software Test Plans (User Test, Unit Test and System Test) – Specific test plans targeting the goal of the tester. User tests are for the possible users of the system. Unit tests are tests performed by technicians of specific segments of software applications. Systems tests are complete end-to-end tests of software and data prior to user testing.

Local Meeting: Pilot Intro – Initial meeting(s) with potential pilot partners to establish and formalize goals, opportunities and barriers.

Local Meetings – Regular meetings to keep local stakeholders informed of progress.

WA-Trans Pilot Communication Plan

Communication Matrix

	Project Manager	WA-Trans Steering Committee	Data Modeling Team	Pilot Advisory Committee	Pilot Technical Lead	Pilot Team	Pilot Partners	WA-Trans Partners	Framework Management Group	Granting Authority	Broader Community	Period
Charter	L	R – M		A – M	S	U	A – M	R – W	**R - W**	A – M	R - W	Once
Schedule	L	R – M		A – M	S	U	A – M	R - W	R – W	A – M	R – W	Once
Status Report (HL)	L	R – M			S			R – W	R – M	R – M	R – W	At regularly scheduled meetings
Status Report (DT)	A – M			R – M	L	S	R - M					Weekly
Change Request												
Issue Statements												
QA/QC Plan (HL)	L	S/A – M		R – M	R – M	R – M	R – M	R – W	R – W	R – M	R - W	Once
QA/QC Plan (DT)	R – M			A – M	L	S	A – M	R – W			R – W	Once
Metrics Reports (HL)	L	A-M			S		R-M	R-W	R-W	R-M	R-W	Once
Metrics Reports (DT)	A-M			A-M	L	S	R-M					Once
Marketing Plan	L	R-M			S			R-W	R-W		R-W	As needed
Database Review	L	R-M	A-M	R-M	R-M		R-M	R-W	R-W			Once
OIT Change Mgmt.												
Pilot Lessons Learned	A-M	R-M		A-M	L	S	A-M	R-W	R-W	R-M	R-W	Once

Role Indicator: L – Lead, A – Assist, R – Review Communication Forum: M – Meeting, W – Web (Internet)

WA-Trans Pilot Communication Plan

	Project Manager	WA-Trans Steering Committee	Data Modeling Team	Pilot Advisory Committee	Pilot Technical Lead	Pilot Team	Pilot Partners	WA-Trans Partners	Framework Management Group	Granting Authority	Broader Community	Period
Partnership MOA	L	R-M		A-M	S		A-M	R-W	R-W		R-W	Once
Data Sharing Agreement	L	R-M		A-M	S		A-M	R-W	R-W		R-W	As needed
Licensing Agreements												
Software Requirements & Scope (HL)	L	A-M			S			R-W	R-W	A-M	R-W	Once
Software Requirements & Scope (DT)	A-M			A-M	L	S	R-M					Once
Software Test Plans (User Test)	L	A-M			S			R-W	R-W	R-M	R-W	Once
Software Test Plans (Unit & System)	A-M			A-M	L	S	A-M					Once
Local Meeting Pilot Intro	L			S	S		S					Once per location needed
Local Meetings	S			S	L	S	S					

Role Indicator: L – Lead, A – Assist, R – Review Communication Forum: M – Meeting, W – Web (Internet)

Change Management Plan

Change management (also known as change control) is a process used for the management of scope, schedule and budget. Changes in pilots will follow the Project Change Management Process. The partners or technical staff may request changes in the pilot scope through the Pilot Technical Lead. The Technical Lead evaluates the change request in terms of whether the request supports a priority pilot objective. If so, the request is evaluated in terms of the cost and impact to the pilot scope, schedule and budget. Based on this the Technical Lead will either reject or accept the change. If the change alters the scope, schedule or budget the change request is sent to the Project Manager. The Project Manager will evaluate the request. If the change on scope schedule or budget is small and the value of the change is significant the Project Manager will approve the change. If the change causes significant impact to the schedule or budget the request will be submitted by the Project Manager and Technical Lead to the Pilot Advisory Committee for resolution. If the change has statewide significance (ex. changes the data structure, changes the priorities or vision set by the steering committee or affects implementation already underway elsewhere, the change request will be submitted to the Steering Committee for resolution.

Washington Transportation Framework (WA-Trans)

Change Request Form

Date:
Change Request Number:

Pilot Name:

Requestor Name:	**Phone Number:**
Organization:	

Change Request *Completed by Requester*	
Description of requested change:	
Expected benefits or reason for change:	

Authorization *Completed by Technical Lead or Project Manager*				
Type of Change:	Geographic ☐	Data Set ☐	Software ☐	Database ☐
Cost of Change:	$ $0.00		Hours 0	
Schedule Impact:				
Resource Type Needed:				

Approvals
Change in SSB approved by Tech. Lead – Date Approved:
Change justifiable & minimal SSB approved by Proj. Mgr. – Date Approved:
Change justifiable & significant SSB approved by Pilot Adv. Com. – Date Approved:
Change of statewide significance approved by Steering Com. – Date Approved

Issue Management Plan

Issue management plans provide each pilot with an escalation procedure for dealing with issues. Issues tend to be technical, organizational, business-oriented or political in nature. Each type of issue requires an escalation process, which facilitates a reasonable resolution at the lowest possible level. This includes expertise and authority to determine solutions and implement resolutions. Issue escalation allows resolution of issues requiring changes in policy and potentially changes of law. Issue management involves identifying the issue, documenting the issue, identifying alternative solutions, and documenting pros and cons of alternative solutions. Issues and issue documentation are then escalated through the appropriate path where they are resolved at the lowest possible level. The documentation is then appended to show resolution. Care must be taken to assure issues are resolved as soon as possible and not left hanging. And issue statement form is provided with the issue management plan to be used for documenting each issue and resolution. Additionally issue documentation provides a history of project decisions made to prevent making the same decision in a different way in different pilots. If this documentation is shared between pilots the learning experience will be shared and thus efficiencies gained.

Assumptions

- Escalating issues for timely resolution is not a poor reflection on anyone's abilities. We would rather have a team come together to resolve an issue or problem quickly, rather than individuals spending an inordinate amount of time trying to resolve it themselves.
- lack of action on unresolved issues is not acceptable. Decisions need to be made in a timely manner.
- If the issue is escalated it becomes a priority task. The time allowed for resolution begins when you are made aware of the issue, it is not began when you have time to work on it. If your workload is such that you cannot get to it for days the team lead needs to decide the priorities. The issue may be assigned to someone else for resolution.
- Prior to escalating an issue it needs to be clearly documented using the Issues Statement Form, to include alternatives and recommendations.

Escalation Path	Escalation by Issue Type		
	Technical	**Business**	**Inter-Organizational**
			Geographic Information Technology Subcommittee of the Information Services Board
			WAGIC
		Framework Management Group	Framework Management Group
		WA-Trans Steering Committee	WA-Trans Steering Committee
	Steering Committee Technical Resources	Pilot Advisory Team	Pilot Advisory Team
	Project Manager	Project Manager	Project Manager
	Pilot Team (i.e., Technical Lead, Programmers, GIS Specialists)	Pilot Team (i.e., Technical Lead, Programmers, GIS Specialists)	Pilot Team (i.e., Technical Lead, Programmers, GIS Specialists)

WA-Trans Pilot Communication Plan

Pilot Name:

Date:
Issue Number:

Prepared by:			**Phone Number:**
Organization:			
Issue Assigned To:			**Due Date:**
Criticality:	High ☐	Medium ☐	Low ☐

Issue Statement
Issue Statement:
Background:
Impact:

Proposed Alternatives **Attach additional pages as necessary**
***ALTERNATIVE 1*:**
Pros:
Cons:
***ALTERNATIVE 2*:**
Pros:
Cons:
***ALTERNATIVE 3*:**
Pros:
Cons:
DO NOTHING:
Pros:
Cons:

Issue Review/Escalation	
Issue Reviewed By:	**Date:**
Comments:	

Issue Disposition			
Issue Resolved:	Yes	☐	**Chosen Alternative Number:**
	No	☐	*If No, indicate disposition of the issue*
Comments:			

Approval
Issue Mitigation Authorized by:
Date:

Appendix B – Risk Management Plan

Introduction

A risk management plan includes a risk assessment and mitigation plans. A well-done risk assessment will provide a timeline for monitoring specific risks and mitigation strategies that can be implemented when a particular risk is "triggered". Risks are defined within specific categories to facilitate grouping and organization and to illustrate linkages between risks and mitigations. This document defines risks as a combination of "*risk conditions*" and "*risk consequences*". A particular risk condition may have multiple risk consequences. That is illustrated throughout this document. Sometimes a risk consequence becomes a risk condition for other consequences. The interdependent nature of risks means there may be multiple similar risks documented. Additionally, one mitigation strategy may work for several different but related risks. Each risk category is defined and followed by the risks that fall under that category.

For each risk combination an impact is defined. *Impact* is defined as the "loss or effect on the project as the risk occurs". *Probability* is defined as "the likelihood the risk will occur". The *timeframe* is defined as "the period when action is required in order to mitigate the risk". Timeframe is referred to as "Time" in this risk assessment. *Risk exposure* (RE) is defined as an attribute of risk that is derived from impact and probability using the following relationship: "RE = Prob(UO) x Loss(UO) where Prob(UO) is the probability of an unsatisfactory outcome (UO) or risk, and Loss(UO) is the loss to the parties affected if the outcome is unsatisfactory (i.e., the risk occurs)." In this case probability was assigned based on whether a risk had already occurred or seemed to be likely to occur. These are subjective judgments, which will benefit from input from all the partners.

The following table illustrates how the relationship between impact, probability and risk exposure were evaluated for this risk assessment both qualitatively and quantitatively:

	Probability			
Impact	**Frequent (4)**	**Probable (3)**	**Improbable (2)**	**Impossible (1)**
Catastrophic (4)	High (16)	High (12)	Moderate (8)	None (4)
Critical (3)	High (12)	Moderate (9)	Moderate (6)	None (3)
Marginal (2)	Moderate (8)	Moderate (6)	Low (4)	None (2)
Negligible (1)	Moderate (4)	Low (3)	Low (2)	None (1)

This document can be used to assess risks and provide guidance for recognizing approaching risks. Plans made early in the project allow for the implementation of contingencies and project structures that support specific mitigation strategies throughout the project and for the use of continuous risk management as a major project management tool. The charter, work plan, budget and communication plan should all be coordinated with the risk assessment to support the use of continuous risk management.

To manage and track risks this document will use **bold letters** when a mitigation strategy is underway and comments following in *italics* to explain the mitigation strategy status. Periodically the pilot advisory committee will change a risk probability and or impact based upon the mitigation strategy status.

.

Risk Category 1: *Participation* Participation is a key element to success in WA-Trans and in WA-Trans Pilot I. Particular partners have already committed to participation. Additional partners may be needed for data and/or testing software and the resulting data set.							
Risk #	***Risk Condition***	***Risk Consequence***		***Imp-act***	***Prob-ability***	***Expo-sure***	***Mitigation Strategy***
I.	Municipalities and tribes within counties identified for the pilot: • Lack education or knowledge of WA-Trans, • Are funded through cost recovery.	A.	Unwillingness or inability to participate.	4	4	High	• Use the communication plan and presentation materials to educate participants about WA-Trans and benefits of participating. • Set up meeting with municipalities and attend user groups to solicit involvement. • Work through committed counties and MPO to elicit cooperation and participation. • Use alternative sources for data including ortho-photos to compensate for missing data. (high potential cost).
		B.	Data needed for a jurisdiction not made available.	4	2	Mod	
II.	Regular communication is inadequate or through mediums not easily accessible to participants.	A	Partners don't participate in pilot meetings, or major decisions affecting them.	4	3	High	• Develop a complete communication plan with different means of communicating with partners and potential partners • Develop cost, resource and time assessments and publicize them. • Set up a SharePoint on an external (non-WSDOT) ISP and use to coordinate project communications. • Check with participant regularly to get feedback on how communication is working.
		B	Partners don't provide resources.	4	3	High	
		C	Partners' critical issues are not identified in a timely manner.	3	3	High	
		D	Data needed for the framework is not made available	4	2	Mod	
III.	New partners join the project after pilot plan is in place.	A	Scope changes are required.	3	2	Mod	• Gather business needs for new participants and determine the commonalities with those already gathered. • Use change management process for handling scope changes once initial business requirements and prioritization are complete. • Don't allow revisiting issues to occur unless the majority of the
		B	Business drivers and priorities are influenced	3	4	High	
		C	Time is spent revisiting decisions reached earlier.	4	2	Mod	

Legend

Impact Rating: *1* – Negligible, *2* – Marginal, *3* – Critical, *4* – Catastrophic
Probability Rating: *1* – Impossible, *2* – Improbable, *3* – Probable, *4* – Frequent
Risk Exposure Level: None, Low, Moderate (Mod), High

Risk Category 1: *Participation* Participation is a key element to success in WA-Trans and in WA-Trans Pilot I. Particular partners have already committed to participation. Additional partners may be needed for data and/or testing software and the resulting data set.							
Risk #	***Risk Condition***	***Risk Consequence***		***Imp-act***	***Prob-ability***	***Expo-sure***	***Mitigation Strategy***
		D	The schedule and budget are exceeded.	4	3	High	
IV.	Inability to schedule key resources for the project at the needed time.	A	The project schedule is not followed.	3	4	High	• Communicate costs of changes to participants on a regular basis. • Have alternatives planned for each resource. • Use change management process to deal with resource losses. • Develop alternate schedules for various resource combinations. • File an extension with the USGS. • Look to other partners to provide resources. • Look for additional funding to hire resources.
		B	The deliverables are not completed on time.	3	3	Mod	
		C	Knowledge about data is not available, thus tasks and mistakes consume time inefficiently.	2	3	Mod	

Impact Rating: *1* – Negligible, *2* – Marginal, *3* – Critical, *4* – Catastrophic
Probability Rating: *1* – Impossible, *2* – Improbable, *3* – Probable, *4* – Frequent
Risk Exposure Level: None, Low, Moderate (Mod), High

Risk Category 2: *Funding* Although funding is allocated for this pilot there is minimal additional funding for contingencies and none allocated for maintenance.							
Risk #	***Risk Condition***	***Risk Consequence***		***Imp-act***	***Prob-ability***	***Expo-sure***	***Mitigation Strategy***
V.	Funding doesn't include maintenance costs and plans.	A	The translator isn't maintained.	4	3	High	• Make maintenance of data a requirement of any data sharing agreement • Include maintenance costs in any funding requests. • Work through existing WSDOT Geographic Services agreements and resources to maintain the translator. • Use Transportation Pooled Fund monies where possible to pay for maintenance during the development of the other tools. • Work through existing partners to determine methods of maintaining translator. • Include maintenance as part of any future pilot efforts so costs and impacts can be accurately tracked, communicated and evaluated. • Include a regular QA cycle as part of WA-Trans maintenance to check for quality of data and maintenance over time. • Update WA-Trans using orthophotos and other data sources when maintenance can't be relied upon.
		B	Framework is not used.	4	2	Mod	
		C	Some data will not work with the framework over time.	3	2	Mod	
		D	The NSDI CAP investment is lost.	3	3	Mod	

Impact Rating: *1* – Negligible, *2* – Marginal, *3* – Critical, *4* – Catastrophic
Probability Rating: *1* – Impossible, *2* – Improbable, *3* – Probable, *4* – Frequent
Risk Exposure Level: None, Low, Moderate (Mod), High

Risk Category 3: *Agreements*

Agreements are being piloted, however the pilots are short-term and inter-agency agreements can take a significant amount of time to develop. Additionally, negotiation is a key part of the pilot for these agreements.

Risk #	*Risk Condition*	*Risk Consequence*		*Impact*	*Probability*	*Exposure*	*Mitigation Strategy*
VI.	Inadequate cooperation across jurisdictional and political boundaries.	A	Data is missing.	4	3	High	• Use MPO and other steering committee members to elicit participation. • Use data from existing partners first to illustrate how it works. • Develop agreements supporting long-term integration. • Use alternate sources of data, including orthophotos, to compensate for missing data. • Show examples of where concerns cross boundaries, natural or man made disasters, freight mobility issues, and various other reasons why multiple jurisdictions should become involved and cooperate and get business areas to "lobby" for participation.
		B	Data does not "connect".	3	2	Mod	
VII.	Formal data agreements are not established with data providers.	A	Framework data becomes out of date.	4	3	High	• Require completion of a formal data sharing agreement before utilizing data. • Include maintenance plans in front end plans for WA-Trans and facilitate them throughout. • Use MOU for initiating pilot with ongoing work for formal data sharing agreements. • Include a regular QA cycle as part of WA-Trans maintenance to check quality of data and maintenance over time. • Update WA-Trans using ortho-photos and other sources when maintenance can't be relied upon. • Include the cost of developing data sharing agreements in all budgets and schedules.
		B	Framework data has less credibility because data changes are not managed.	4	2	Mod	
		C	Investment in WA-Trans Pilot 1 is wasted as work is redone.	3	2	Mod	

Impact Rating: *1* – Negligible, *2* – Marginal, *3* – Critical, *4* – Catastrophic
Probability Rating: *1* – Impossible, *2* – Improbable, *3* – Probable, *4* – Frequent
Risk Exposure Level: None, Low, Moderate (Mod), High

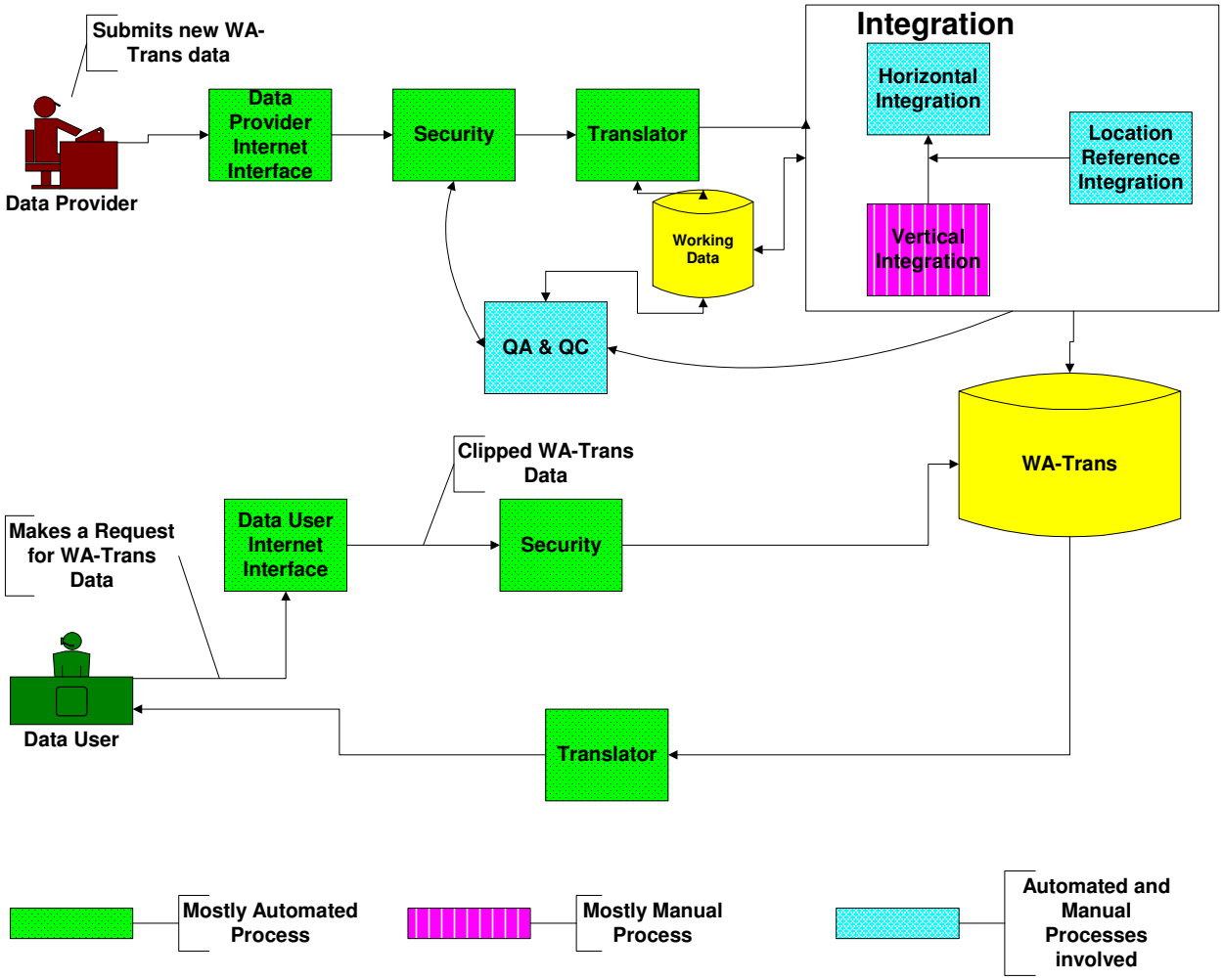
Risk Category 4: *Technical*

Technical requirements for this pilot are moderately challenging. Coordinating with organizations outside the State Agencies and specifically outside WSDOT has its own challenges. Additionally coordinating so the right technology is available at the right time is a key issue.

Risk #	*Risk Condition*	*Risk Consequence*		*Impact*	*Probability*	*Exposure*	*Mitigation Strategy*
VIII.	Unable to provide access to WA-Trans test data behind WSDOT firewall for non-WSDOT participants.	A	Resources can't work on the data.	4	2	Mod	• Develop processes for synchronizing data during pilot so a copy can reside with PSRC and at WSDOT and only work on one at a time. • Contract out hosting of WA-Trans, with minimum specifications for speed, bandwidth.
		B	Duplicate databases must be maintained during pilot.	4	3	High	
IX.	Technology is not available or is too costly to implement to support the vision of WA-Trans Pilot 1, particularly the translator.	A	Translator cannot be fully implemented for pilot.	4	3	High	• Develop working prototype of translator getting as much as functionality as possible with time and resources available and use prototype and scope additional pilots to complete. • Use manual processes to complete terms of pilot, using additional pilots to develop the translator.
		B	Attempts to implement the framework with less effective technology fail or take extra time, adding significant cost and time.	4	3	High	
X.	The RFP does not include add needed requirements for the Translator.	A	It costs too much to build the translator	3	2	Mod	• Develop working prototype of translator getting as much as functionality as possible with time and resources available and use prototype and scope additional pilots to complete. • Use manual processes to complete terms of pilot, using additional pilots to develop the translator. • Apply for an extension with the USGS.
		B	The timeline cannot be followed	3	3	Mod	
		C	The translator doesn't meet business needs.	3	3	Mod	

Impact Rating: *1* – Negligible, *2* – Marginal, *3* – Critical, *4* – Catastrophic
Probability Rating: *1* – Impossible, *2* – Improbable, *3* – Probable, *4* – Frequent
Risk Exposure Level: None, Low, Moderate (Mod), High

Appendix C – WA-Trans Conceptual Architecture



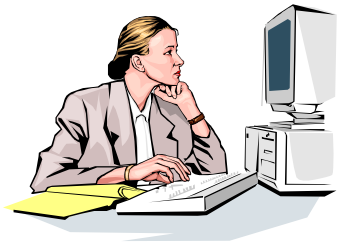
Appendix D – Conceptual Architecture for WA-Trans Pilot I

Data Provid

Translator

Integration & QA / QC Processes

WA-Trans



Translator

Data User Including The National Map

Appendix E – Specific Anticipated OIT Resources Required

Task	Skill Set and Possible Resource	Anticipated Hours	Anticipated Timeframe	Manager	Notes
Evaluate and score RFP's and vendor demonstration	GIS Data Steward - Michelle Blake	20	8/15/05 - 8/19/05	Chris Kemp	
Assist with Testing Apparently Successful Vendor	GIS Data Steward - Michelle Blake	20	9/6/05 -9/16/05	Chris Kemp	
Provide access to test data for vendor demonstrations	GIS Data Steward - Michelle Blake	5	8/25/05 - 8/31/05	Chris Kemp	
Provide support for implementation of successful translator upon completion	GIS Data Steward - Michelle Blake; Database Administrator - Tess Starr; Infrastructure Support - ??	10 hours initially, 1 - 2 hours at a time periodically during pilot	11/21/05 - 2/29/06	Chris Kemp (Tess and Michelle), Tim Crabb (Jay)	
Provide WSDOT road data for pilot as needed	GIS Data Steward - Michelle Blake	20 hours	late next spring	Chris Kemp	Phase II of pilot if funded
Provide access to test version of WA-Trans database to Puget Sound Regional Council	GIS Data Steward - Michelle Blake or Database Administrator - Tess Starr; Infrastructure Support - ??	16 hours (DBA); 4 hours (IS)	12/01/05 - 3/01/06	Chris Kemp (Michelle), Tim Crabb (servers), Dennis DeFreis (network)	
Provide access to translator to Pierce County and King County during the pilot	Infrastructure Support	8 hours	11/01/05 - 3/01/06	Tim Crabb (server), Dennis DeFries (network)	
Create Test Plans to evaluate vendors work on translator	Project Support - Thelma Smith; GIS Data Steward - Michelle Blake	40 hours	11/01/05 - 2/15/06	Sarah Schroder (Thelma), Chris Kemp (Michelle)	
Provide results of WA-Trans pilot to Sound Transit and other testing partners for evaluation	GIS Data Steward - Michelle Blake	8 hours	3/01/06 - 6/01/06	Chris Kemp (Michelle)	Done after data is actually provided to The National Map.
Create data loading and extraction routines to test database	GIS Data Steward - Michelle Blake; Database Administrator - Tess Starr	40 hours	10/15/05 - 11/15/05	Chris Kemp	Contingency - we may not need to do this if translator works as planned.